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Chairperson: IT News Africa  
Innovation Dinner, 31 July 2012**

**A Look at Next Generation  
Technologies (LTE) and how Africa will  
benefit from fast broadband services -**

# Next Network Generation & Technologies

A New Regulatory Framework for the Information and Communications Technologies is on the Horizon

# 1<sup>st</sup> Wave of ICT Development

Introduction of Digitisation, Computerisation and Packet-based Switching results in convergence of telecoms, broadcasting and computing technologies

In Response ITU called for Sector-Specific Regulation for ICTs

# 1<sup>st</sup> Wave of ICT Regulation

- Separation of Policy, Regulation and Services
- Liberalisation of telecoms through licensing New Operators
- Development of Regulations to Govern competition in telecoms Sector
  - Interconnection
  - Facilities Leasing
  - Tariffs
  - Quality of Service
  - Consumer Protection & Universal Access and Service

# 2<sup>nd</sup> Wave of ICT Regulation

Building on digital networks established during 1<sup>st</sup> Wave of convergence:

- Emergence of Intelligent Networks
  - Internet Protocol
  - Mobile Communication
  - New Generation Access Networks

# 2<sup>nd</sup> Wave of ICT Regulation

Internet Protocol platform provides for:

- Separation between Network Technology and Services
- End-to-end Architecture
- Shortage of Address capacity
- Decentralised control

# Next Generation Network's Regulatory Challenges

New Generation Networks offer innovation and choice for the consumer but poses several challenges for national regulators

- Ubiquitous networks that transcend national borders
  - Users have access to networks & competing services – which Interconnection model should regulators use?
    - IP Interconnection model such as as Peering & Transit? or
    - A modified Public Switched telecoms Network interconnection model and tariff regime?



# New Generation Network Regulatory Challenges

- Quality of Service affected by several factors:
  - Delay/bit error and packet loss/speech compression/echo/firewalls
- Security for consumers, national and international concerns with regard to message integrity and signal interception
- Shortage of Internet Protocol Addresses (IP Version 4) to disadvantage of developing countries



# Regulatory Options for New Generation Networks

Regulation cannot hinder innovation and choice, it is in the interest of consumers to have the best available ICT services of offer.

New Generation Networks need to embrace Quality of Service and Universal Access and Service to allow for light touch regulation amongst other requirements including competition and affordability of services

# Regulatory Options for New Generation Networks

Policy precedes Regulation. Regulations implements what is contained in national policy.

The development of a national ICT policy is a priority for the country – process led by Minister of Communications.

All stakeholders, including Regulator, to input national ICT policy development process in next 12 months or so

# Regulatory Options for New Generation Networks

Regulation should:

- Not Create artificial barriers for realisation of full converged services
- Not Create unjustified biases that favour or retard one segment of industry in relation to others
- Address new public service and public interest opportunities and requirements
- Facilitate application of new technologies and networks to achieve universal access and service
- Redefine Universal Access and Service to include access to network infrastructure (eg Internet access for rural areas)

# Regulatory Options for New Generation Networks

National regulators will need to review their regulations to meet challenges of the new environment:

- Review Price regulation (handset subsidies are part of mobile pricing schemes, for example)
- Impact of Call Termination on full Number Portability
  - Voice Over Internet Protocol must not create Termination Monopoly
- New Network Interconnection framework may require unbundling of certain facilities to include new network infrastructure, many new small operators

# Regulatory Options for New Generation Networks

- Development of new Cost Accounting Models
- Licensing will need to consider:
  - Radio frequency spectrum allocation/refarming to accommodate demands of new applications
  - Licence terms and Conditions to include geographical coverage/level of service/pricing
  - Rights-of-Way and infrastructure sharing
  - Review Numbering framework to include Internet Protocol numbers
- Increased Regional and international harmonisation of regulation – CRASA for SADC

# Regulatory Options for New Generation Networks

Electronic Communications Act provides for ICASA to:

- License services and networks separately
- Adopt a technology-neutral approach in regulating ICTs

ICASA awaits national ICT Policy to review regulations for the new environment.





**I THANK YOU**